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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,198	09/29/2003	James Patrick Clinch	140/40652/O&T 975	2676

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EXAMINER

MITCHELL, KATHERINE W

ART UNIT PAPER NUMBER

3677

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/674,198	Applicant(s) CLINCH ET AL.	
	Examiner Katherine W. Mitchell	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-8, 10-20, 22-24, 26-30, 32-35, 37-42, 44-47 and 49-58 is/are pending in the application.
 4a) Of the above claim(s) 22-24, 26 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 44-47 is/are allowed.
- 6) ☐ Claim(s) 1-3, 5-7, 10-12, 19, 29, 30, 32-35, 37-42, 51-54, 57 and 58 is/are rejected.
- 7) ☐ Claim(s) 4, 8, 13-18, 20, 27, 49, 50, 55 and 56 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner. *clarity/typing only*
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/11/06 and 1/17/06</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION



Formal Matters

The amendment filed 1/19/2006 by fax is of poor quality - there are vertical lines of no text and vertical black lines over text in other places. The claims will not properly scan if allowed to issue. Applicant should either use different fax equipment or mail in any future correspondence.

Election/Restrictions

Newly amended claim 22 and thus its dependent claims 23, 28, 24, 26 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claim 22 is a combination claim, requiring a workpiece, nut, cage and fastener. As originally presented, the claim was not restrictable. Although the combination did NOT require all the particulars of the subcombination cage member (it did not require that the body provided a limited range of movement in multiple dimensions), the subcombination could not be used without a workpiece and fastener. However, now applicant requires the nut member to directly contact the base portion, which means the subcombination has separate utility, in that it could be used with a second workpiece such that the nut member does not directly contact the base portion of the cage.

Inventions I subcombination (cage member or cage member and nut assembly) and II (cage member, nut, fastener, and workpiece with upper portion of cage member encaging said nut member and flexed downwardly by said nut member toward cage member base such that said nut member directly contact said base portion) are related

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as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination does not require the cage member body to provide a limited range of movement of the nut member in multiple dimensions. The subcombination has separate utility such as a cage member used with multiple workpieces, such that the nut member comes in direct contact with an intermediate workpiece rather than the cage member base.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 22 and thus its dependent claims 23, 28, 24, 26 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

1. Claim 22 is objected to because of the following informalities: In line 12, "to" should be deleted because of the amendment wording. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3,5-7,10-12,19, 29, 30, 32-35, 37-42, and 51-54 and 57-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Tinnerman USP 2258342, hereafter called Tinnerman '342.

Re claims 1-3, 5-7, 10,11,12,19, 29, 30, 32-35, 37-42, 51-54 and 57-58:
Tinnerman 342 in Figs 1-3 teaches a cage member and nut assembly, said nut (15) having a 1st and 2nd portion (see marked up drawings below) enclosed by a cage member (10/11) which has a body configured to engage the nut member such that the nut member is encaged. The cage further comprises a body (11/10), and "11" is considered the upper cage/arm portion, and "10" is the base. The wall is labeled by examiner in drawings below. The nut engagement is such that the 2nd portion (same as the portion labeled "1st plate" below - looking at the drawings as oriented, it is the "lower" part of nut below "11") of the nut does not come into contact with either the base or the wall. Figs 1 and 3 shows a limited range of motion in three dimensions, and thus in two dimensions, wherein neither of said two dimensions is provided along n axis about which the nut aperture is defined. The body provides a limited range of nut movement in at least two dimensions (axially along what could be called the bolt axis or z-axis is one dimension of limited movement, the plane perpendicular to this, in the x-axis approximately on the surface of "11" -- see dotted lines added to figure 1 below).

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Examiner notes that the movement in the x dimension is very limited, but movement is allowed while the nut is still encaged. Regarding the third dimension, note that applicant has not claimed movement of the nut relative to the cage member, but only nut movement. Tinnerman is clear in col 1 below that slight movement of the nut to accommodate slight misalignment was a problem earlier nut connections:

An effort has been made to retain a nut in bolt receiving position by welding it to one of the parts, but such method is not only expensive, 15 but is objectionable in that the nut cannot be moved a slight distance to compensate for misalignment of the openings in the two parts that are to be connected together.

Not only does Tinnerman state in his claim (below) that the curved-plane holding elements holding the nut are in "resilient engagement" with the nut grooves,

ing a nut having generally horizontal grooves on opposed sides thereof and a nut holder comprising a strip of sheet metal bent to provide a pair of arms extending in the same general direction. 35 for receiving therebetween an apertured part to be secured, one of said arms of the nut holder being provided with a slot having an open end receiving the nut and defining a pair of spaced holding elements having generally curved-plane 40 surfaces, said nut being applied to the open end of said slot with said holding elements received in said grooves thereon and the generally curved plane surfaces of said holding elements in resilient engagement with the adjacent walls of said 45 grooves for frictionally retaining the nut in assembled relation with the nut holder.

but the arm is made of a bent sheet metal strip which is inherently flexible and bendable, and, being an arched strip connected only at one end, the opposite end, where the nut is engaged, will inherently allow a certain amount of flexing and bending of the arm, and thus the encaged nut, in all three dimensions.

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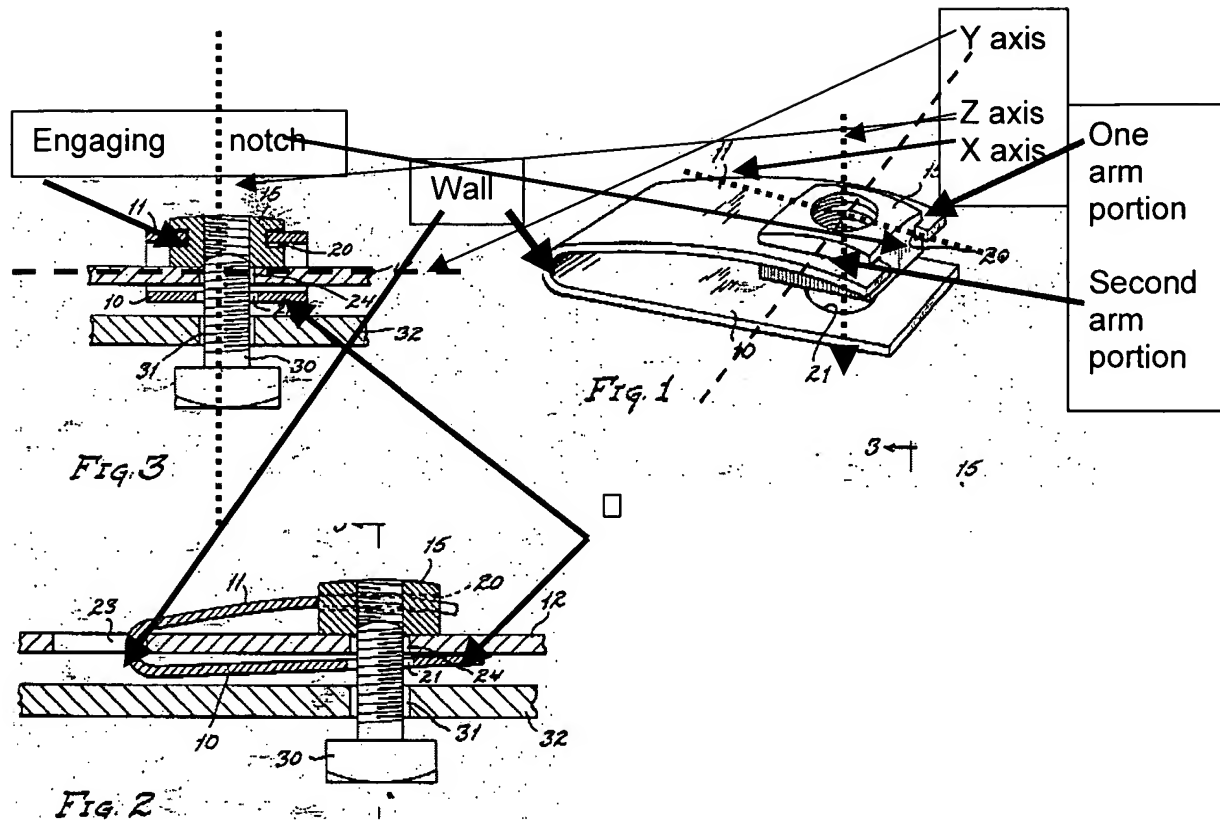
The fastener illustrated comprises a clip that 35
is formed from a sheet metal strip that is bent
upon itself to make a lower arm 10 and an up-
per arm 11, the two arms being spaced apart a
substantially constant distance to admit one of the nuts to

Further Re claims 3 and 12: As shown in Fig 1, arm portion 11 forms two arm portions at the end as labeled by examiner in drawings below. These two arms are opposite each other.

Further re claims 5-6: The arms are opposite each other and form an opening sized to receive the nut. The size is constant when the nut is engaged or not engaged. Each arm can be considered generally C shaped - the arms together form a C, and thus they are considered to each have a generally c-shaped portion (half of a C). These C-shaped portion are opposite each other and define said opening.

Further Re claims 7 and 19: The at least one arm 11 is inherently flexible - see col 1 lines 41-42 and line 27, and line 36 - sheet metal that can be bent is inherently flexible.

Further Re claims 29-30 and 34-35 and 39-42: Tinnerman '342 in Figs. 1-3 teaches a nut (15) enclosed by a cage member (10/11) which has a body configured to engage the nut member such that the nut member is engaged. (Fig 1 and 2) "11" is considered the upper cage portion, and engaging notch (best shown in Fig 1 and 3) will inherently serve to suspend the nut off the base.



Further, the upper portion (arm 11) of said cage member is configured to engage said nut member 15. Examiner notes that applicant is claiming an apparatus “comprising”, and Fig 2 shows every claimed structural limitation. Fig 2 shows the combination including

- nut member 15 having an aperture (see Fig 1 showing threaded aperture extending at least partly through) to receive a fastener (bolt 30)
- cage member (whole piece including 10/11) (Fig 2 and 3) engageable with nut

Fig 1 and 3 show said nut with 1st plate and 2nd plate and a connecting member between said plates, each plate having an upper and lower surface, with aperture therethrough. The upper portion of cage comprises at least one arm extending from said base with said arm having an upper surface in contact with said lower surface of nut second plate (see marked up figures)

Further Re claims 29-30, 34,35: Fig 1 shows a cage member suspending the nut off the base, and above the base, prior to said fastener being received in the nut aperture.

Further Re claims 39-42: the cage body has an upper portion (11) configured to encage the nut member such that said nut member is suspended. It is suspended both above the base portion 10 and from said upper portion 11.

Further Re claim 32,37: The body further comprises at least one wall (see label by examiner above), and Figs 1- 3 show the nut engaged such that the nut does not contact at least one wall.

Further Re claims 33,38: Said body comprises at least one arm 11 which serves to suspend said nut above said base. (Figs 1 and 3). Examiner notes that applicant did not require the arm to extend **directly** from said base - it extends from the wall which extends from the base, and thus is also considered to extend from the base.

Re claims 51,53: The arms portions extend indirectly from opposite sides of base portion.

Re claims 52,54: at least part of the arm portions (marked up Fig 1) are capable of independent movement relative to each other -pliers on the end of each arm could move them independently.

Response to Arguments

4. Applicant's arguments, filed 1/19/2006, have been fully considered but are not persuasive. Applicant argues that Tinnerman 342 does not teach limited range of movement in all three dimensions. Examiner disagrees. Applicant has agreed that Tinnerman allows limited movement in the Z dimension (bolt axis). Examiner notes that the nut is placed between the arms by sliding (the direction of sliding is considered the X direction - see marked up Fig 1 above); thus inherently there is a limited range of movement relative to the cage in the x dimension. There is an ample gap at the end to allow such motion while the nut remains encaged. Further, as discussed in the rejection, applicant has not claimed movement of the nut relative to the cage member, but only nut movement. Tinnerman is clear that slight movement of the nut to accommodate slight misalignment was a problem earlier nut connections, and thus it is a problem he was addressing. Not only does Tinnerman state in his claim that the curved-plane holding elements holding the nut are in "resilient engagement" with the nut grooves, but the arm is made of a bent sheet metal strip which is inherently flexible and bendable, and, being an arched strip connected only at one end, the opposite end, where the nut is engaged, will inherently allow a certain amount of flexing and bending of the arm, and thus the encaged nut, in all three dimensions.

5. Applicant has amended claim 22 to require that the nut must directly contact the base. Per above, this is now a restrictable combination claim.
6. Applicant did discuss the issue of three dimensions as patentable over Tinnerman on the phone with examiner in Jan 2006, and on first reflection, having the "snug fit" of the nut in the grooves of the cage, it seemed to be patentable over Tinnerman. However, when considering new claims 57 and 58 in view of Tinnerman, examiner realized the claims did not require movement of the nut relative to the cage, and thus the movement could be due to the flexibility of the cage member arms. A call was made on March 27 2006 by examiner, but applicant was unavailable.

Allowable Subject Matter

7. Claims 44-47 are allowed.
8. Claims 4,8,13-18,20, 27 and 49,50,55, and 56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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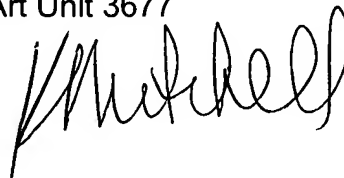
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 571-272-7069. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Katherine W Mitchell
Primary Examiner
Art Unit 3677



Kwm

3/29/06